

## Restriction of plasmid DNA

This is a standard BioBrick restriction of plasmid DNA containing a BioBrick suffix and prefix. These standard restrictions are performed using EcoRI, PstI, XbaI, SpeI, NdeI, all high fidelity restriction enzymes.

### *Materials*

- CutSmart buffer
- RNase/DNase free water
- Restriction enzymes

### *Method for analysis*

1. Measure the concentrations of the plasmid DNA.
2. Take between 200 and 500 ng of plasmid DNA for each restriction.
3. Add 1/10 of the total restriction volume of CutSmart buffer.
4. Use 0.5 µl of each 20.000 units restriction enzyme. (Use 1 µl of 10.000 units restriction enzymes.)
5. Add RNase/DNase free water up to the total restriction volume.
6. Mix gently and incubate in a waterbath at 37 C for 1 hour.
7. Go to the protocol gel electrophoresis.

### *Method for ligation*

1. Measure the concentrations of the plasmid DNA.
2. Take 1.5 µg of plasmid DNA for each restriction.
3. Add 1/10 of the total restriction volume of CutSmart buffer.
4. Use 0.5 µl of each 20.000 units restriction enzyme. (Use 1 µl of 10.000 units restriction enzymes.)
5. Add RNase/DNase free water up to the total restriction volume.
6. Mix gently and incubate in a waterbath at 37 C for 1 hour.